

What is claimed is:

1. A print system including a printer and a content server connected to the printer via a network, comprising:

a content database for the content server which collects a plurality of kinds of content original data;

a reader which, in the content server, reads content original data of a kind selected by a user as content data from the content database;

a printer specifying information requester which gives a request for transmission of printer specifying information including a printer identifier to specify the printer to the printer which is transmitted the content data read by the reader from the content server;

a printer specifying information transmitter which transmits the printer specifying information including the printer identifier from the printer to the content server based on the request from the printer specifying information requester;

a print job data generator which, in the content server, generates print job data including at least the content data and the printer specifying information based on the content data read by the reader and the received printer specifying information;

a print job data transmitter which transmits the print job data from the content server to the printer;

a print job data receiver which receives the print job data transmitted from the content server to the printer;

a judging portion which, in the printer, reads the printer identifier included in the printer specifying information of the print job data and judges whether the printer identifier coincides with its own printer identifier; and

a print executor which executes print of the print job data in the printer only when the judging portion judges that the printer identifier included in the print job data coincides with its own printer identifier.

2. The print system according to claim 1, wherein when transmitting the printer specifying information to the content

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server, the printer encrypts the printer identifier and transmits the encrypted printer identifier as the printer specifying information.

3. The print system according to claim 1, wherein when transmitting the printer specifying information to the content server, the printer transmits the printer identifier as the printer specifying information without encrypting the printer identifier.

4. The print system according to claim 1, wherein the print job data includes at least one first copy guard code inserted at a specific position and one or a plurality of second copy guard codes inserted dispersively in the content data as required depending on a data length of the content data,

wherein the print job data generator generates the first copy guard code including at least the printer specifying information and a first code pointer indicating a position of a next second copy guard and inserts the first copy guard code at the specific position, and when the content data exists at a position indicated by the first code pointer, inserts a second copy guard code including at least a second code pointer which indicates a position of a second copy guard code next to the next second copy guard code at the position, and repeats the insertion of the second copy guard codes until the entire length of the content data is covered, and

wherein the first and second code pointers are determined randomly every time these first and second code pointers are generated.

5. The print system according to claim 4, wherein the content server encrypts the first code pointer.

6. The print system according to claim 4, wherein the content server encrypts the first code pointer and holds a code pointer decrypting key which is a decrypting key of the first code pointer.

7. The print system according to claim 1,

wherein the print job data generator
 generates a third copy guard code including at least the
 printer specifying information and generates encrypted content
 data by encrypting the content data, and
 generates the print job data with at least the third copy
 guard code and the encrypted content data.

8. The print system according to claim 7, wherein a content
 data decrypting key which is a decrypting key of the encrypted
 content data is held in the content server.

9. The print system according to claim 1,
 wherein the print executor comprises:
 a print permission requester which gives a request for print
 permission to the content server from the printer when the judging
 portion judges that the printer identifier included in the print
 job data coincides with its own printer identifier;
 a print permission transmitter which transmits print
 permission from the content server to the printer when the request
 for print permission is given from the printer; and
 a permitted print executor which executes print based on
 the print job data in the printer which has received the print
 permission.

10. The print system according to claim 9,
 wherein the print job data includes at least one first copy
 guard code inserted at a specific position and one or a plurality
 of second copy guard codes inserted dispersively in the content
 data as required depending on a data length of the content data,
 wherein the print job data generator generates the first
 copy guard code including at least the printer specifying
 information and a first code pointer indicating a position of
 a next second copy guard and inserts the first copy guard code
 at the specific position, and when the content data exists at
 a position indicated by the first code pointer, inserts a second
 copy guard code including at least a second code pointer which
 indicates a position of a second copy guard code next to the next

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second copy guard code at the position, and repeats the insertion of the second copy guard codes until the entire length of the content data is covered, and

wherein the first and second code pointers are determined randomly every time these first and second code pointers are generated.

11. The print system according to claim 10, wherein the content server encrypts the first code pointer.

12. The print system according to claim 10, wherein the content server encrypts the first code pointer and holds a code pointer decrypting key which is a decrypting key of the first code pointer.

13. The print system according to claim 12, wherein the print permission transmitter transmits the code pointer decrypting key as the print permission from the content server to the printer based on the request for the print permission from the printer.

14. The print system according to claim 13,
wherein the permitted print executor
decrypts the first code pointer with the code pointer decrypting key as the decrypting key to obtain the position of the next second copy guard code and sequentially obtain positions of subsequent second copy guard codes each based on a second code pointer of the preceding second copy guard code, and
executes print after removing these first and second copy guard codes in sequence.

15. The print system according to claim 9,
wherein the print job data generator
generates a third copy guard code including at least the printer specifying information and generates encrypted content data by encrypting the content data, and
generates the print job data with at least the third copy guard code and the encrypted content data.

16. The print system according to claim 15, wherein a content data decrypting key which is a decrypting key of the encrypted content data is held in the content server.

17. The print system according to claim 16, wherein the print permission transmitter transmits the content data decrypting key as the print permission from the content server to the printer based on the request for the print permission from the printer.

18. The print system according to claim 17, wherein the permitted print executor obtains the content data by decrypting the encrypted content data with the content data decrypting key as the decrypting key and executes print based on this content data.

19. The print system according to claim 1,
wherein the print job data generator generates the print job data with protection to prevent unjust copy,
wherein the print job data receiver temporarily stores the received print job data in an auxiliary memory of the printer without removing the protection, and
wherein the judging portion reads the print job data from the auxiliary memory.

20. The print system according to claim 19, wherein the print executor requests a protection removing key necessary to remove the protection from the content server only when the judging portion judges that the printer identifier included in the print job data coincides with its own printer identifier.

21. The print system according to claim 20, wherein when transmitting the printer specifying information to the content server, the printer encrypts the printer identifier and transmits the encrypted printer identifier as the printer specifying information.

22. The print system according to claim 20, wherein when transmitting the printer specifying information to the content

server, the printer transmits the printer identifier as the printer specifying information without encrypting the printer identifier.

23. The print system according to claim 19,

wherein the print job data includes at least one first copy guard code inserted at a specific position and one or a plurality of second copy guard codes inserted dispersively in the content data as required depending on a data length of the content data as the protection,

wherein the print job data generator generates the first copy guard code including at least the printer specifying information and a first code pointer indicating a position of a next second copy guard and inserts the first copy guard code at the specific position, and when the content data exists at a position indicated by the first code pointer, inserts a second copy guard code including at least a second code pointer which indicates a position of a second copy guard code next to the next second copy guard code at the position, and repeats the insertion of the second copy guard codes until the entire length of the content data is covered, and

wherein the first and second code pointers are determined randomly every time these first and second code pointers are generated.

24. The print system according to claim 23, wherein the content server encrypts the first code pointer.

25. The print system according to claim 24, wherein a code pointer decrypting key which is a decrypting key of the encrypted first code pointer is held as the protection removing key in the content server.

26. The print system according to claim 19,

wherein the print job data generator

generates a third copy guard code including at least the printer specifying information and generates encrypted content data by encrypting the content data as the protection, and

generates the print job data with at least the third copy guard code and the encrypted content data.

27. The print system according to claim 26, wherein a content data decrypting key which is a decrypting key of the encrypted content data is held as the protection removing key in the content server.

28. A printer connected to a content server via a network, comprising:

a printer specifying information transmitter which transmits printer specifying information including a printer identifier to specify the printer based on a request from the content server;

a receiver which receives print job data having at least content data and the print specifying information including the printer identifier from the content server;

a judging portion which reads the printer identifier included in the printer specifying information of the print job data and judges whether this printer identifier coincides with its own printer identifier or not; and

a print executor which executes print of the print job data only when the judging portion judges that the printer identifier included in the print job data coincides with its own printer identifier.

29. The printer according to claim 28, wherein when transmitting the printer specifying information to the content server, the printer specifying information transmitter encrypts the printer identifier and transmits the encrypted printer identifier as the printer specifying information.

30. The printer according to claim 28, wherein when transmitting the printer specifying information to the content server, the printer specifying information transmitter transmits the printer identifier as the printer specifying information without encrypting the printer identifier.

wherein the print job data includes at least one first copy guard code inserted at a specific position and one or a plurality of second copy guard codes inserted dispersively in the content data as required depending on a data length of the content data,

wherein the second copy guard codes each include at least a second code pointer which indicates a position of a second copy guard code next thereto, and

32. The printer according to claim 31, wherein the first code pointer is encrypted by the content server.

a third copy guard code including at least the printer specifying information; and

34. The printer according to claim 28, wherein the print executor comprises:

a print permission receiver which receives the print permission transmitted from the content server; and

a permitted print executor which executes print based on the print job data after receiving the print permission.

35. The printer according to claim 34,

wherein the print job data includes at least one first copy guard code inserted at a specific position and one or a plurality of second copy guard codes inserted dispersively in the content data as required depending on a data length of the content data,

wherein the first copy guard code includes at least the printer specifying information and a first code pointer indicating a position of a next second copy guard code,

wherein the second copy guard codes each include at least a second code pointer which indicates a position of a second copy guard code next thereto, and

wherein the first and second code pointers are determined randomly every time these first and second code pointers are generated.

36. The printer according to claim 35, wherein the first code pointer is encrypted by the content server.

37. The printer according to claim 36, wherein the print permission receiver receives a code pointer decrypting key which is a decrypting key of the encrypted first code pointer as the print permission from the content server.

38. The printer according to claim 37,

wherein the permitted print executor

decrypts the first code pointer with the code pointer decrypting key as the decrypting key to obtain the position of the next second copy guard code and sequentially obtain positions of subsequent second copy guard codes each based on a second code pointer of the preceding second copy guard code, and

executes print after removing these first and second copy guard codes in sequence.

39. The printer according to claim 34, wherein the print job data includes at least:

a third copy guard including at least the printer specifying information; and

encrypted content data generated by encrypting the content data.

40. The printer according to claim 39, wherein the print permission receiver receives a content data decrypting key which is a decrypting key of the encrypted content data as the print permission.

41. The printer according to claim 40, wherein the permitted print executor obtains the content data by decrypting the encrypted content data with the content data decrypting key as the decrypting key and executes print based on this content data.

42. The printer according to claim 34, wherein when transmitting the printer specifying information to the content server, the printer specifying information transmitter encrypts the printer identifier and transmits the encrypted printer identifier as the printer specifying information.

43. The printer according to claim 34, wherein when transmitting the printer specifying information to the content server, the printer specifying information transmitter transmits the printer identifier as the printer specifying information without encrypting the printer identifier.

44. The printer according to claim 28,
wherein the print job data is given protection to prevent unjust copy,

wherein the print job data received from the content server is temporarily stored in an auxiliary memory of the printer without the protection being removed, and

wherein the judging portion reads the print job data from the auxiliary memory.

45. The printer according to claim 44, wherein the print executor requests a protection removing key necessary to remove the protection from the content server only when the judging portion

judges that the printer identifier included in the print job data coincides with its own printer identifier.

46. The printer according to claim 44, wherein when transmitting the printer specifying information to the content server, the printer specifying information transmitter encrypts the printer identifier and transmits the encrypted printer identifier as the printer specifying information.

47. The printer according to claim 44, wherein when transmitting the printer specifying information to the content server, the printer specifying information transmitter transmits the printer identifier as the printer specifying information without encrypting the printer identifier.

48. The printer according to claim 44,

wherein the print job data includes at least one first copy guard code inserted at a specific position and one or a plurality of second copy guard codes inserted dispersively in the content data as required depending on a data length of the content data as the protection,

wherein the first copy guard code includes at least the printer specifying information and a first code pointer indicating a position of the second copy guard code next thereto,

wherein the second copy guard codes each include at least a second code pointer which indicates a position of a second copy guard code next thereto, and

wherein the first and second code pointers are determined randomly every time these first and second code pointers are generated.

49. The printer according to claim 48, wherein the first code pointer is encrypted by the content server and a decrypting key of this encryption is used as a protection removing key necessary to remove the protection.

50. The printer according to claim 44, wherein the print job

data includes at least:

a third copy guard code including at least the printer specifying information; and

encrypted content data generated by encrypting the content data as the protection.

51. A content server connected to a printer via a network, comprising:

a content database which collects a plurality of kinds of content original data;

a reader which reads content original data of a kind selected by a user as content data from the content database;

a printer specifying information requester which requests transmission of printer specifying information including a printer identifier to specify the printer from the printer which is transmitted the content data read by the reader;

a printer specifying information receiver which receives the printer specifying information from the printer;

a print job data generator which generates print job data including at least the content data and the printer specifying information based on the content data read by the reader and the received printer specifying information; and

a print job data transmitter which transmits the print job data to the printer.

52. The content server according to claim 51,

wherein the print job data includes at least one first copy guard code inserted at a specific position and one or a plurality of second copy guard codes inserted dispersively in the content data as required depending on a data length of the content data,

wherein the print job data generator comprises:

a first copy guard code generator which generates the first copy guard code including at least the printer specifying information and a first code pointer indicating a position of a next second copy guard code and inserts the first copy guard code at the specific position; and

a second copy guard code generator which, when the content

date exists at a position indicated by the first code pointer, inserts a second copy guard code including at least a second code pointer which indicates a position of a second copy guard code next to the next second copy guard code at the position, and repeats the insertion of the second copy guard codes until the entire length of the content data is covered, and

wherein the first and second code pointers are determined randomly every time these first and second code pointers are generated.

53. The content server according to claim 52, further comprising a first encryptor which encrypts the first code pointer.

54. The content server according to claim 52, further comprising a second encryptor which encrypts the first code pointer and holds a code pointer decrypting key which is a decrypting key of the first code pointer in the content server.

55. The content server according to claim 51, wherein the print job data generator comprises:
a third copy guard code generator which generates a third copy guard code including at least the printer specifying information; and

a third encryptor which generates encrypted content data by encrypting the content data, and

generates the print job data with at least the third copy guard code and the encrypted content data.

56. The content server according to claim 55, further comprising a holder which holds a content data decrypting key which is a decrypting key of the encrypted content data.

57. The content server according to claim 51, wherein a request for print permission is transmitted from the printer to the content server only when the printer identifier included in the printer specifying information of the print job data coincides with a printer identifier of the printer's own,

wherein print permission is transmitted to the printer when the request for print permission is received.

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